



Final report to Governor Schweitzer: Oil Pipeline Safety Review Council

November 2012

Prepared by:

**The Montana Department of Natural Resources and Conservation
The Montana Department of Environmental Quality, and
The Montana Department of Transportation**

Final Report:

Oil Pipeline Safety Review Council

I. Introduction and Purpose of the Council:

The Oil Pipeline Safety Review Council (Council) was established by Executive Order No. 10-2011, July 20, 2011 (Attachment A). It is comprised of the Directors of the Montana Department of Transportation, the Montana Department of Natural Resources and Conservation (DNRC), and the Montana Department of Environmental Quality (DEQ). The Council was directed to advise the Governor on the status of all oil pipelines running underneath Montana's rivers and streambeds. By verbal direction of the Governor, the charge was expanded to include pipelines carrying all commodities.

The Council divided its work into two components:

1. A review of all available information for each pipeline crossing to assess the risk of ruptures and leaks. This information could include pipeline age, thickness and corrosion, condition and operation of all shut off valves, the valve distances from the creeks or rivers, what products the pipelines are carrying, the pipeline diameters, and what pressures the pipeline products are under. The Council would endeavor to identify any critical information gaps that exist in the pipeline network within Montana, and
2. An assessment of the regulatory framework for pipelines and identification of any regulatory gaps that might exist.

The Council agreed to produce a final report that would include recommendations to prevent future failures.

A series of public meetings were held with presentations of what information was available, and what information needed to be requested from pipeline companies. Each meeting included information and pipeline safety management presentations from the federal Pipeline and Hazardous Material Safety Administration (PHMSA). Opportunities were made available for technical presentations regarding technologies available to detect leaks and to notify the public of pipeline failures.

II. Public Meetings of the Council

The following four public meetings were held by the Council:

August 3, 2011: The meeting opened with a welcome by Governor Schweitzer. There followed a discussion of the purposes of the Council. Richard Opper, Director of DEQ, was elected as Chair of the Council by his fellow members. The Council developed a work plan and assigned tasks to appropriate personnel. The meeting was then opened up for public comment.

November 15, 2011: The meeting focused on work status updates. Nat Carter with the Montana Department of Environmental Quality presented the Montana Pipeline Safety Map

the state now can access that gives very specific information about all pipelines in the state and the locations of their crossings (Attachment B). This map is a Geographic Information System (GIS) based tool developed by the Council's Agency's, focusing on pipeline data maintained by the PHMSA National Pipeline Mapping System. Next, Chris Hoidal, with PHMSA, summarized the results of PHMSA's inspections of pipeline crossings over Montana's largest rivers. PHMSA is an agency under the U.S. Department of Transportation, and it has the responsibility of inspecting pipelines and ensuring their safety. There was a series of technical presentations on new technologies that could improve pipeline safety. The meeting ended with an opportunity for public comment.

February 8, 2012: The meeting began with a work status update that included a presentation by Chris Hoidal of the progress made on remediating "at risk" pipeline crossing sites. Next, representatives from the following agencies discussed their pipeline regulatory authorities:

- PHMSA
- The Montana Public Service Commission (PSC)
- The Montana Board of Oil and Gas
- The Montana Department of Environmental Quality, and
- The Montana Department of Transportation

There followed a technical presentation on new technologies for leak detection. The meeting ended with public comment.

August 17, 2012: After approval of the minutes of the February 8 meeting, Chris Hoidal gave an update on the considerable work that PHMSA has done with the pipeline companies since the February meeting of the Council. The work included several additional replacements of at-risk pipeline crossings. The rest of the meeting involved a discussion of the public comments received on the Draft Report to the Governor: Oil Pipeline Safety Review Council. The comments focused on the following categories:

- State authority over pipeline safety
- A Citizens Advisory Council to help oversee pipeline safety in Montana
- Mapping,
- Spill response planning, and
- Education and assistance

The meeting ended with a brief discussion of the next steps, which involve revising the report based on public comment received, and a mid-September meeting in which the final report is presented to the Governor.

All meeting minutes (Attachment C) and copies of the presentations are posted on DEQ's website at www.deq.mt.gov.

III. PHMSA Actions: PHMSA's staff spent the past year inspecting Montana's major pipeline crossings. PHMSA's focus areas included: petroleum pipelines (crude oil and refined products), river crossings greater than 100 feet from high water mark to high water mark, located in Montana and rivers flowing into Montana, constructed with open trench technology, exposed or lack of depth-of-cover, and river history.

PHMSA's request for information prompted operators to perform in-depth studies/analyses on all their major pipeline river crossings. The "at-risk" sites identified by the studies are now being actively mitigated – either armored with rock or grout bags or re-drilled deeply under rivers (by Horizontal Directional Drilling or HDD). To date, the remedial actions that are completed or will be completed in the near term and later as shown include the following:

- **ExxonMobil**

- Developed contingency plan to operate and monitor the Silvertip Pipeline during flooding conditions, including enhanced patrolling and surveillance
- Completed In-Line-Inspection (ILI) to detect metal loss and/or deformation and make necessary repairs
- ExxonMobil completed metallurgical investigation of Yellowstone River crossing failure
- Closed Corrective Action Order (CAO) – August 8, 2012
- PHMSA is finalizing incident investigation
 - Yellowstone River (Laurel): HDD completed
 - Rock Creek (Rockvale): HDD completed
 - Clark's Fork of the Yellowstone (Bridger): HDD completed

- **CHS:**

- Musselshell River (Shawmut): HDD completed

- **CHS: (Future)**

- Tongue River: HDD in 3-5 years

- **Phillips 66 Pipeline LLC:**

- Coeur D'Alene River @ MP476 (#1 priority) – Kingston, ID: HDD nearing completion
- Clark Fork River @ MP319.1 (#2 priority) Yellowstone Pipe Line (just east of Missoula): HDD completed
- East Gallatin River @ MP148.3 Yellowstone Pipe Line (North of Manhattan): motor-operated valve installed
- Judith River 8" & 12" @ MP207 (Hobson): HDD nearing completion
- East Gallatin River @ MP148 North of Manhattan: HDD nearing completion
- Beauvais Creek: HDD completed
- Belt Creek (Belt): added cover completed
- Coeur D'Alene River: Grout bags/temporary repairs (Campground Rd, Silver Bridge) completed
- Beaver Creek: MP 197.7 New trenched crossing (Refrigerator Canyon & Winston) completed
- Tongue River (WY): Grout bags/spring monitoring completed

- **Phillips 66 Pipeline LLC: (Near Future)**

- Yellowstone @ MP 2.2: River Rock weir installation • Delayed pending permit issues
- Coeur D'Alene River @ MP 456.6 (Silver Bridge): HDD • Drilling expected to start in September
- Clark Fork River @ MP 264.7: HDD • Drilling expected to start in September
- Big Horn River @ MP 44.5: HDD • Delayed pending land use permit
- Tongue River @ MP 88.3: HDD • Drilling expected to start in September

- **Phillips 66 (Future) (2013-2015)**
 - Yellowstone River @ MP 1.3
 - Missouri River @ MP 269.3
 - Yellowstone River 8” & 10” delivery line
 - Marias River 8” & 12” @ MP 353.2
 - Musselshell @ MP 45.5
 - Cut Bank Creek @ MP 379.8 & MP 370
- **KinderMorgan**
 - Clark Fork of Yellowstone River; Greybull River; Musselshell River: depth-of-cover surveys
- **Marathon (Wyoming)**
 - Shoshone River; Wind River; Big Horn River: depth-of cover surveys
- **True (Bridger Pipeline)**
 - Poplar River/Missouri: Took out of service during flooding event due to valve inaccessibility (back in service)
 - Yellowstone River and Poplar River: 2011 depth-of-cover surveys conducted and show adequate cover

IV. Council Conclusions and Recommendations:

A. Available Information: Thanks to a cooperative agreement with PHMSA, Montana’s Agencies have access to a great deal of information about the existing pipelines in and through the state as maintained by PHMSA’s National Pipeline Mapping System (NPMS). Each Agency on the Council signed a data sharing agreement with the NPMS allowing them access to all the NPMS pipeline data in the state. Through an Interagency GIS effort, an interactive map, the Montana Pipeline Safety Map, was created with many layers of information to help Council members better understand the breadth of pipelines throughout Montana and crossing its waterways. The map provides the following information on each pipeline segment obtained via the NPMS:

- Operator
- Operator ID
- System Name
- Subsystem Name
- Diameter
- Commodity
- Commodity Alternatives
- Commodity State
- Interstate Transmission
- Low Stress
- Service Status
- Location Accuracy
- Date Added to NPMS
- Date NPMS last updated

The Council’s Montana Pipeline Safety Map allows Montana agency staff to see all the pipelines in the state alongside a myriad of information, including aerial photos,

topographic maps, property boundaries, and ownership, as well as locations of environmental interest like monitoring stations and wells. The map is interactive and allows the user to zoom in and out and pan around at their leisure.

In addition to the information currently available through the Montana Pipeline Safety Map, PHMSA has surveyed each pipeline operator to gather additional data and the state is working with PHMSA to obtain as much as possible. PHMSA has requested the operators provide the following information for each pipeline crossing Montana's navigable waters greater than 100 ft in length. Survey information provided by Conoco Philips, CHS, Kinder Morgan, Marathon, and True pipeline operators:

- River Crossing
 - River Name
 - Pipeline Size
 - Pipeline Name
- Location
 - County
 - Nearest Town
- Depth of Cover Surveys
 - Date
 - Depth
- MLV Alignment Sheets (Remotely actuated valves?)
 - Upstream and/or downstream of crossing
- Worst Case Discharge
 - Units of bbbbls
- Integrity Threats Reports/Studies
- Analysis Used for Remedial Actions (stream flow, depth-of-cover)
- Outside 3rd Party Consultants Used in Analysis
- Remedial Actions taken in 2011
- Short-term Remedial Action Schedule
- Long-term Remedial Action Schedule
- Procedures to Monitor during Flooding
- Operator Priority for Remediation
- PHMSA Added Comments

The state knew little about the overall complex underground network of pipelines in Montana prior to the formation of the Council. However, the Council, along with great efforts by PHMSA, has helped the state assemble data and understand the pipeline infrastructure and how to maintain its safety in Montana.

RECOMMENDATION #1: DEQ will maintain an agreement with PHMSA and the National Pipeline Mapping System to keep the Montana Pipeline Safety Map data current and available to the Montana Departments of Environmental Quality, Natural Resources and Conservation, and Transportation. The Montana DEQ will request updated mapping information from PHMSA at least twice per year, and it will share with PHMSA any information gathered by the state that PHMSA wants to add to its mapping system.

B. Regulatory Framework: The state has various programs related to the regulation of pipelines. However, the Montana Public Service Commission is the only state agency with direct regulatory authority over safety of any pipelines. The PSC's authority is restricted to intrastate gas lines. All other safety-related authority rests with the PHMSA and preempts state regulation of safety factors. PHMSA conducts all the pipeline safety inspections, not only in Montana, but in almost all states.

PHMSA devoted a lot of resources to Montana following the break of the Silvertip Pipeline in the Yellowstone River in July 2011. It inspected about 100 major river crossings and some of the nearby smaller crossings. It discovered several "at risk" areas, and is overseeing the companies' efforts to correct the problem crossings. Still, PHMSA has a small staff and it does not have the funding to maintain the level of work in Montana that it has conducted since the Silvertip oil spill.

The lack of federal resources is among the factors that led to suggestions from the public that Montana, like a few other states have done, develop its own expertise in pipeline safety inspections. Many suggested that Montana essentially take over the functions currently served by PHMSA. These suggestions raised many questions, such as why replace expertise that already exists? Where would the funding to run the program come from? Which Montana agency would become responsible for pipeline safety? Instead of creating a new, expensive, and duplicative state program, the Council members were more comfortable with the following recommendation:

RECOMMENDATION # 2: The Council will urge Montana's Congressional delegation to support adequate funding for PHMSA to oversee pipeline safety in Montana. The Council members will draft a letter to Montana's Congressional delegation and request regular updates on PHMSA's funding outlook.

Many members of the public recommended that a permanent Citizens Advisory Committee be formed that could serve as a point of contact for PHMSA, or citizens in the case of an emergency; help prioritize PHMSA's future inspections in the state; prepare and/or review spill response plans; help with public education about pipeline safety; and so on. The Council saw the value in continuing to involve members of the public in pipeline safety issues. However, the Council had concerns about how such a Committee would be funded, where to house it, and whether it is truly in the state's interest to form yet another appointed committee. In light of these concerns, the Council made the following recommendation:

RECOMMENDATION # 3: The Directors of the Montana Departments of Environmental quality, Natural Resources and Conservation, and Transportation, plus one elected member of the Montana Public Service Commission will hold 2 public meetings per year on pipeline safety.

In effect, this recommendation extends and expands the membership of the Pipeline Safety Council. Instead of having a goal of producing recommendations for the Governor, the Council would help keep members of the public involved in pipeline safety issues, keep

abreast of latest technological innovations in pipeline safety, receive updates on PHMSA's work in Montana, develop pipeline safety legislation if necessary, maintain the Pipeline Safety Council Website that currently exists, etc. Keeping the Council intact would eliminate almost all the expense of forming a new citizen's committee while essentially achieving the same benefits. The new Council should meet in communities outside of Helena in at least 1 of its 2 meetings per year. It should also contact groups like the Pipeline Safety Trust in Bellingham, Washington, to learn about things like how to keep the public engaged and which issues to focus on.

The Council also received many public comments in support of expanding the state's mapping capabilities to include channel migration zones and supporting all reasonable efforts to require pipeline companies to have state of the art leak detection systems in place. There is much information available from a variety of sources on channel migration zones, particularly lateral migration zones. This information can help pipeline companies determine how far from the existing river channel its pipe should enter and exit the floodplain when companies reinstall a crossing with horizontal directional drilling technology. Therefore, the Council makes the following recommendation:

RECOMMENDATION # 4: The GIS experts from the 3 existing Council agency staff should assemble all existing channel migration information into a map feature that can be added to the Montana Pipeline Safety Map. Available sources of information include County Floodplain Managers, the Federal Emergency Management Agency, The Natural Resources and Conservation Service, the state legislative Water Policy interim Committee, and the Montana Conservation Districts. This information should be consolidated by the end of calendar year 2013.

Many members of the public suggested that the state should develop a statewide spill response plan. Much planning work is already taking place along these lines. The Council does not feel the need to offer a specific recommendation along these lines. However, it does recommend the following:

RECOMMENDATION # 5: Any spill response plans being developed, whether local or statewide, should utilize the expertise of PHMSA, the state Department of Disaster and Emergency Services, DEQ, DNRC, MDT, or any other state, federal or local governmental entity capable of assisting an emergency response and other non-governmental groups such as the International Union of Operating Engineers that may have the equipment or personnel resources to aid in a response.

Over the course of the past year, the Council members learned that pipeline companies lacked all the licenses and easements that should be in place at every major river crossing. Therefore:

RECOMMENDATION # 6: DNRC and DEQ should review and implement land use licensing and easement applications for major river crossings, and require safety and environmental measures to protect the banks and channels of the rivers at existing crossings.

The Council received many other comments from the public, all of which are posted on DEQ's Pipeline Safety Council website at deq.mt.gov. Some of the comments that are worth future consideration but are not listed in the recommendations above include the following:

- Require emergency plans that allow the fastest possible valve shut off for stopping the flow of pipeline contents in case of a rupture.
- Require companies to shut down flow if an emergency (flooding, earthquake, etc.) presents a threat to the integrity of a pipeline.
- Support local government and PSC efforts to obtain and operate notification systems for citizens to be informed as soon as possible when ruptures occur.
- Require all pipeline companies operating in Montana to embark on a long-term program to replace all major trenched river crossings with horizontal directional drilled crossings.
- Develop more state expertise on the impacts of oil spills on agricultural operations – crops and livestock.

Attachment A: Executive Order #10-2011

STATE OF MONTANA
OFFICE OF THE GOVERNOR
EXECUTIVE ORDER NO. 10-2011

EXECUTIVE ORDER ESTABLISHING AN OIL PIPELINE SAFETY REVIEW COUNCIL

WHEREAS, the State of Montana needs to act quickly to review the status of all oil pipelines underneath our State's rivers and streambeds in the wake of the July 1, 2011 oil spill into the Yellowstone River. Therefore, in accordance with section 2-15-122, MCA, I am establishing an Oil Pipeline Safety Review Council

I. PURPOSE:

The purpose of this Council is to advise the Governor on the status of all existing oil pipelines running underneath Montana's rivers and streambeds. The Council will review all the documentation necessary to analyze and critique the safety of each pipeline and the standards required at the time of installation of each pipeline. The Council will assess the risk of ruptures and leaks in all sections of pipeline that cross Montana's rivers and streams. The review will gauge a variety of factors including each pipeline's age, thickness and corrosion, and the condition and operation of all shut-off valves. The Council will make recommendations to prevent any future failures that damage Montana's pristine rivers and streams.

II. COMPOSITION:

The Council will consist of the Directors of the Department of Environmental Quality, the Department of Natural Resources and Conservation and the Director of the Department of Transportation or any of their designees. The Directors will select a Chair for the Council at their first meeting.

III. DURATION:

The Council will exist for one year from the date of this order. This order is effective immediately.

NOW, THEREFORE, I, BRIAN SCHWEITZER, Governor of the State of Montana, pursuant to the authority vested in me as Governor under the Constitution and laws of the State of Montana do hereby create the Oil Pipeline Safety Review Council.

This Order is effective July 20, 2011.

GIVEN under my hand and the GREAT
SEAL of the State of Montana, this
20th day of July, 2011.


BRIAN SCHWEITZER, Governor

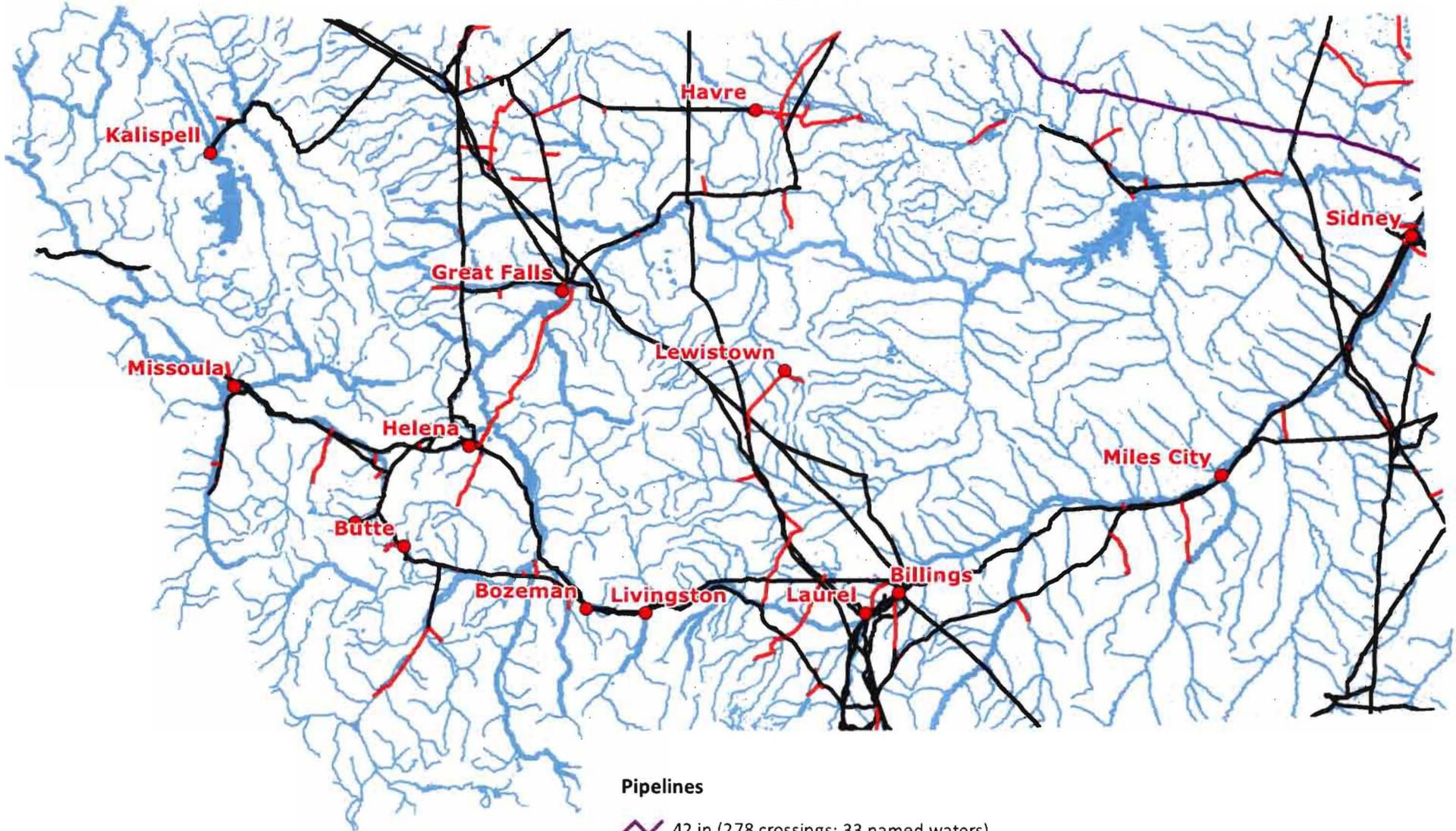
ATTEST:


LINDA McCULLOCH, Secretary of State

Attachment B:

Map of Pipeline River Crossings in Montana

Pipeline River Crossings in Montana



Pipelines

-  42 in (278 crossings; 33 named waters)
-  8 - 30 in (7564 crossings; 1385 named waters)
-  < 8 in (1543 crossings; 307 named waters)

Rivers

-  Navigable Waters (88 Crossings of 21 Waters)
-  Major Rivers

** Please note that many streams in the 1:24k NHD are intermittent and/or are not named.

Data Sources (2012) :

Pipelines - USDOT National Pipeline Mapping System

Navigable Waters - MT Dept. of Natural Resources & Conservation

Major Rivers - USGS 1:24k National Hydrography Dataset



Attachment C:

Minutes of the Pipeline Safety Council Meetings

Montana Oil Pipeline Safety Review Council
August 3, 2011, 9:00 – 10:30 a.m.

Draft Meeting Minutes

Council Members Present:

Richard Opper - DEQ, Mary Sexton – DNRC, Jim Lynch – MDOT.

I. Welcome by Governor Brian Schweitzer

Governor Brian Schweitzer opened the meeting with a welcome. He had called a meeting of state personnel more than a year earlier to discuss pipeline safety, so it is an issue that was on his mind well before the pipeline break.

The Governor acknowledged that oil will continue to be produced in Montana and elsewhere around the region, and that it will continue to need to be shipped via pipeline to various locations. Since the industry isn't going away, it's time to look at what other states are doing, and find out where the gaps are in our information base, easement process, and regulatory authority. He formed the council to help the state collect the information in one location on the number and location of pipeline stream crossings, the size of pipelines, the products they are carrying, the pressures within those pipelines, and other relevant information, and to make recommendations on steps to ensure better protection of Montana's resources from accidents like the Yellowstone oil spill.

Gov. Schweitzer said that despite some early misunderstandings, both ExxonMobil and EPA understand that the cleanup will be to Montana's standards. He acknowledged that there's no way to clean up all the spilled oil. The state's position is that we need to clean up sites to the point where more damage would be done to a site by additional cleanup work. The Governor acknowledged the hard work of state agencies, and particularly the hard work of Tom Livers and Mary Ann Dunwell from DEQ.

II. Purposes of the Council

Richard Opper provided a summary of the ExxonMobil spill in the Yellowstone River and the process used to clean it up. He then outlined the purposes of the Council, which include advising the Governor on the following items:

- The status of all existing oil pipelines running underneath Montana's Rivers;
- The safety and risk of ruptures and leaks at each pipeline crossing;
- Which agencies have jurisdiction over which aspects of pipeline permitting/easement/safety issues; and
- What should be done to prevent future pipeline failures.

Opper said the Council will develop a comprehensive map of pipeline river crossings. He also suggested that the council should consider changing its name since it would be looking at all pipelines, not just those carrying oil.

III. Election of Council Chair

Mary Sexton nominated Richard Opper to serve as Council Chair, Jim Lynch seconded the nomination, and the vote was unanimous to elect Opper chairman.

IV. Development of Council Workplan and Assignments

Opper said that for each pipeline crossing the council, working closely with the federal Pipeline and Hazardous Material Safety Administration (PHMSA), needed to determine the following, if available:

- ▶ The pipeline diameter;
- ▶ The owner of the pipeline;
- ▶ The product it is carrying;
- ▶ The pipeline age;
- ▶ The pipeline pressure;
- ▶ The distance between shutoff and check valves, their condition, their proximity to the pump stations, and the location of pressure gauges;
- ▶ The pipeline thickness and degree of corrosion;
- ▶ The pipeline burial depth and the degree of river scouring and meandering;
- ▶ What information gaps exist and how to fill them; and
- ▶ What regulatory gaps exist and whether to address them at the federal, state or local level.

V. Public Comment

Opper announced the public comment portion of the meeting. Opper said the council would be working closely with its federal partner, PHMSA, and that some of the information the council received may have to remain private due to Homeland Security requirements. Otherwise, Opper said, all the information from the council would be public

Mary Sexton, DNRC: Mary Sexton reported on the easement application that the DNRC has received from ExxonMobil for a temporary construction permit. This is for the drilling under the Yellowstone River to a depth of 42.5 feet for a new line to replace the Silvertip Pipeline that broke. The deadline for comment is 8/17. She also suggested that the council needs to add checking for easements to its work plan elements.

Chris Hoidal, PHMSA: Chris Hoidal reported that PHMSA has 2 staff based in Helena and 12 engineers in total to cover 2 million miles of natural gas pipeline and 700,000 hazardous liquid lines. PHMSA described a web based map is already available to the public at (<http://www.npms.phmsa.dot.gov/>). The map does not include small streams or pipeline size information. Hoidal said that the federal government inspects interstate pipelines. It oversees design construction and maintenance, and it reviews emergency response plans. PHMSA has authority to shut down pipelines, but did not do so with the Silvertip Pipeline before the break because there was no evidence of imminent harm. Hoidal noted that there has been significant change in the river and that the state was the expert on river movement and stream characteristics. He said that while they had much of the information the Council would be seeking, they did not have details of river crossings and whether or not pipeline crossings were installed through horizontal drilling or trenching. PHMSA started an inventory last May and is continuing to do field inspections, which should be complete by October. The inspections have focused on seams, third party damage, and corrosion. Hoidal asked about gathering lines and regulation. Mary Sexton said the Board of Oil and Gas (BOGC) was the regulatory entity

for this, and she said she would invite its director, Tom Richmond, to a future council meeting.

Jim Lynch, MDT: Jim Lynch said that the material pipelines were made of should be added to the work plan, as well as adjoining landowners for notification purposes.

Peter Nielsen, Missoula City-County Health Department: Peter Nielsen summarized lessons learned in the Missoula area in association with the Yellowstone Pipeline. He indicated that there is some local authority over pipelines. The Yellowstone Pipeline terminates at a Missoula location and it has a leak history. Nielsen indicated that channel migration is a concern as illustrated by exposure of the Yellowstone Pipeline at the Turah crossing of the Clark Fork River. He encouraged gathering information on the depth of cover. He recommended that the Council consider requiring a burial depth two times scour depth. Nielsen listed several data elements that should be collected, including valves, corrosion and leak detection programs, handling and storage at terminals, and pump stations. Nielsen also recommended considering better public education and a one-call system. He suggested that leak prevention and maintenance programs be initiated as a baseline and be kept up to date. Further, he suggested that the state could do a lot with better communication to help smaller communities. A complete channel migration history was suggested as critical to understanding risks and that some pipelines may need to be relocated or reburied. Finally, he suggested that small stream crossings must be included and addressed in light of land use changes that might create vulnerabilities.

Jeff Tiberi, Montana Association of Conservation Districts: Jeff Tiberi said that there are 450 local offices with local information that might help with channel migration zone information and actual delineations.

Gene Onacko, Bureau of Indian Affairs: Gene Onacko noted that the BIA Regional Director, Edward Parisian, is interested in the Council's work. There are four reservations with oil and gas activity and Mr. Parisian will likely contact the Council.

Mark Aagenes, Trout Unlimited: Mark Aagenes offered a list of suggestions, including identifying pipeline prevention and leak plans, identifying crossings of big and small streams, identifying regulatory gaps, examining meandering patterns, identifying upstream rip rap work that may be causing an increase in stream velocity, and reviewing new and better technologies that could be implemented.

Representative Dan Kennedy, an affected land owner in the Silvertip Oil spill: Rep. Kennedy recognized the level of professionalism applied to the spill and offered his appreciation of the efforts. He recommended an industry representative be appointed to serve on the council.

Mike Volesky, Governor's Office: Mike Volesky raised a question about whether the state had authority to require bonding for pipelines to cover costs of future spills. The Forest Service does require bonding for pipelines crossing its lands.

Jenny Pelej, National Wildlife Federation: Jenny Pelej stressed the need to identify regulatory gaps and suggested that the Keystone pipeline not be decided upon before new regulations are in place.

Don Dunwell, KTVH Beartooth News, asked why horizontal drilling of the new pipeline was preferred over trenching. The answer was that horizontal drilling is less invasive, does less damage during installation, and it places the pipe below the scour zone of rivers.

VI. Future Meeting Schedules

Opper suggested that the next meeting date be just before Thanksgiving based on the schedule of PHMSA data being available. Lynch suggested that it should be no later than the 3rd of November.

VII. Adjournment

Lynch made a motion to adjourn, Sexton seconded and the vote was unanimous.

Montana Oil Pipeline Safety Review Council
November 15, 2011, 9:00 – Noon

Meeting Minutes

Council Members Present:

Richard Opper - DEQ, Mary Sexton – DNRC, Tim Reardon – MDOT.

I. Welcome by Chairman, Richard Opper

Chairman Opper opened the meeting with introductions of Council members and the public attendees. General comments were made regarding the agenda and the duties of the council.

II. Approval of Minutes from August 3, 2011 meeting

The minutes were approved without edits.

III. Work Status update

- A. Nat Carter, Department of Environmental Quality, demonstrated the Geographic Information System status regarding mapping elements available from the Department and the Pipeline and Hazardous Materials Safety Administration (PHMSA) data. The pipeline information is mapped, locations of river crossings of all stream sizes are identified and inspection information is entered as it becomes available. The pipeline attributes (such as ownership, commodity, construction characteristics) are available via dropdown menu within the system.
- B. Chris Hoidal, PHMSA, presented information regarding the series of inspections conducted over the last few months on the largest river crossings and many smaller crossings in the vicinity of the large ones. Specific “at-risk” sites were identified and the plans to correct them were discussed. The Powerpoint presentation is publicly available. The discussion included an explanation of abandonment procedures (cleaning of lines and filling with nitrogen), management of pipelines that may be planned for bringing back into service, the sharing of pictures of “at risk” sites, the heightened awareness that is the result of the Silvertip line oil spill, the high level of responsiveness by industry in assessing their lines and engaging in rapid repairs and the need to conduct repairs so that lines are protected from rupture before the next spring runoff. A number of lines need work to provide clear lines of sight inspection for the right of way. PHMSA is prepared to move forward with necessary enforcement actions if “at-risk” line exposures are not mitigated. Some discussion ensued regarding how PHMSA addresses the type of mitigation needed, the unique analysis needed for each individual situation, and the determination of the corrective action.

IV. Technical Information Sharing

There were presentations regarding technical tools available to address monitoring and management of pipeline safety. Powerpoint presentations are publicly available.

A. TerraEchos and UM Flathead Lake Biological Station partner, Alex Philp: Advanced Sensor Systems: Helping Monitor Critical Infrastructure

Mr. Philp presented information on the fiber optic monitoring system available to monitor stream bed load movement and how it could be used to alert pipeline managers of scour risk in high water.

B. Instant Voice Alert system, Tony Verna (will be presented by staff on behalf of Mr. Verna)

Ms. Lovelace, DEQ, presented Mr. Verna's offer, to the State of Montana, of a software and system to be used by emergency responders for alerting citizens of an emergency. The system allows "on-the 'fly" messaging to smart phones and conversion of a typewritten message to voice.

C. Integrity Solutions, Bruce Beighle: Oil Pipeline Risk Management

Mr. Beighle provided information on the types of analysis currently being conducted for risk management of pipelines. The presentation covered detailed analyses of monitoring and site characteristics, including the levels of risk and how the analysis drives corrective measures.

V. Public Comment

Opper announced the public comment portion of the meeting. No public comments were made.

VI. Future Meeting Agenda Items and Schedule

Opper suggested that the next meeting date be in early February when PHMSA expects to have additional information on the mitigations of the "at risk" sites and to address the need for mitigations before spring runoff. Also, a discussion of regulatory tools available for management of pipeline safety will be on the agenda. The exact date is not yet determined.

VII. Adjournment

Opper adjourned the meeting.

Montana Oil Pipeline Safety Review Council
February 8, 2012, 9:00 – Noon

Meeting Minutes

Council Members Present:

Richard Oppen - DEQ, Joe Lamson – DNRC, Tim Reardon – MDOT.

I. Welcome by Chairman, Richard Oppen

Chairman Oppen opened the meeting with introductions of Council members and the public attendees. General comments were made regarding the agenda and the duties of the council.

II. Approval of Minutes from November 15, 2011 meeting

The minutes were approved without edits.

III. Work Status update

- A. A brief discussion covered current status of the data mapping currently shared by the Department of Environmental Quality and the Pipeline and Hazardous Materials Safety Administration (PHMSA). A point of emphasis is that the state needs to maintain its relationship with PHMSA to keep the geographic information system up to date. The public was directed to the PHMSA website for access to the publicly available data.
- B. Chris Hoidal, PHMSA, presented an update of information regarding the series of inspections conducted over the last few months and the follow up corrective actions taken to mitigate the risks. The PHMSA presentation is on the Montana Department of Environmental Quality (DEQ) Pipeline Safety Review Council Webpage.

IV. Rugulatory Framework Discussions

There were presentations regarding agency regulatory framework from PHMSA, the Montana Public Service Commission (PSC), the Montana Department of Transportation (MDT), DEQ, and the Board of Oil and Gas Conservation (MBOG). Materials from presenters is on the DEQ Pipeline Safety Review Council Webpage. During the discussions, presenters were asked if they believed they had gaps in their authorities that the Council could identify as needing to be addressed in future actions.

- A. Joel Tierney, PSC: Described the regulatory framework for the PSC regulation on intrastate gas pipelines, the inspection frequencies, new regulations that include inspection of control rooms and power companies. He indicated that no particular gaps existed.
- B. Chris Hoidal, PHMSA: Addressed the new Pipeline Safety, Regulatory Certainty and Job Act signed by the President in January 2012. Specific items covered included the doubling of fines, elimination of exemptions

from the One-Call law (required before excavating), new provisions for remote controls and automatic shut off valves, study of risks of crude oil from Canadian and Alberta Oil Sands, and \$110 million in safety related grants.

- C. Tom Richmond, MBOG: His agency regulates owner/producers for non-mobile, non-transport, on-site pipes for drilling and production. There are regulations for placement of pipes, types of materials, but not to test flow lines. The Board is looking at reformulating priorities for field inspections.
- D. Ed Hayes, DEQ: Specifically addressed the fact that federal law preempts state authority for interstate pipeline safety. DEQ can clearly look at environmental impacts in the siting of pipelines.
- E. Phil Inman, MDT: His department focuses on issues of approval of attaching a pipeline to bridges. Applicants to use MDT bridge structures must prove that there are no other location to place the pipeline. There are also limitations on such placement based upon seismic activity. MDT does not inspect pipelines and likely lacks enforcement authorities.

V. Technical Presentation

Ralf Tetzner, Krohne, accompanied by Mike Geddes, ICS, presented information on the German requirements for leak detection and the technology used. The presentation is available on the DEQ Pipeline Safety Review Council Webpage.

VI. Public Comment

During the presentations, questions were allowed and answered at that time. Mike Geddes asked about timing of the Council report.

VII. Future Meeting Agenda Items and Schedule

Opper indicated that a draft report would be made available for public comment in late April. A next meeting would occur early in May to finalize the report.

VIII. Adjournment

Opper adjourned the meeting.

Montana Oil Pipeline Safety Review Council
August 17, 2012

Meeting Minutes

Council Members Present:

Richard Opper - DEQ, Mary Sexton – DNRC, Tim Reardon – MDT.

- I. Welcome by Chairman, Richard Opper
Chairman Opper opened the meeting with introductions of Council members and the public attendees. General comments were made regarding the agenda and the duties of the council.

- II. Approval of Minutes from February 8, 2012, meeting
Mary Sexton moved approval of the minutes, Tim Reardon seconded the motion and the minutes were approved without edits.

- III. Work Status update
Chris Hoidal, PHMSA, presented an update of information regarding the series of inspections conducted by PHMSA and the follow up corrective actions taken to mitigate the risks. The PHMSA presentation is on the Montana Department of Environmental Quality (DEQ) Pipeline Safety Review Council webpage:
http://deq.mt.gov/adv_councils/oilpipelinesafetycouncil.mcp.

Hoidal also provided an update on the status of the investigation into the cause of the Silvertip oil spill. The metallurgical analysis report just arrived from the Silvertip pipeline. This will allow PHMSA to proceed with the investigation for possible enforcement action.

Regarding regulatory updates, there is a proposed rule coming out for GIS mapping in relation to a new law, HR2845, signed last year regarding new pipeline regulation. §§ 22 & 28 are of specific interest to Montana. The new rule addresses the kind of information that will be collected for GIS mapping. More information can be found at PHMSA's website: <https://primis.phmsa.dot.gov/comm>. Hoidal indicated that operator companies had been very cooperative during the review process and responded well to requests for increased patrols of pipelines until new regulations correcting certain gaps had been approved. More information can be found in code 195.4521.

Some discussion ensued regarding regulations requiring operators to educate local responders and the public about pipeline locations. Oil spill response plans are available from John Ess at PHMSA at 202-366-4595.

There was a short discussion of the pipeline operators' preferences for prescriptive standards rather than performance standards because of conflicting guidance from PHMSA region to region.

IV. Discussion of Public Comments on Draft Report to Governor

Chairman Opper explained that the draft report was intended to provide a basic guideline of what the council intended to report to the Governor. He said the draft report intentionally lacked specificity to allow the public to have a role in shaping the final recommendations. The public submitted many comments, all of which are available on the Pipeline Council website. The comments generally fell into five categories: Increase state authority to regulate pipeline safety; establish a citizen's advisory committee; spill response planning; mapping; and education and assistance. The council discussed each of the five areas among the council members and with the members of the public who attended the meeting. The discussions are summarized below:

A. Increase State Authority - Fifteen other states, including Washington, have greater regulatory authority over pipelines than does Montana. Council members acknowledged the desire for the state to take a more active oversight role, but they expressed concern about the need for the state to acquire expertise, training, and funding if Montana was to take on the function of overseeing pipeline safety. The council members acknowledged that PHMSA has been very responsive to Montana's needs regarding pipeline river crossings. However, they expressed concerns that PHMSA is an underfunded small agency that might not be able to maintain the level of effort it expended in Montana following the Silvertip Pipeline spill last summer.

B. Citizen's Advisory Council - Council members expressed interest in increasing public participation in this area, but were concerned about authority, funding, and member make up. Council members thought it might be more efficient to add a pipeline overview role to an existing advisory council or board. PHMSA pointed out that having such a group provides a resource for them when working in an area. Local knowledge is invaluable to provide good planning and emergency response. PHMSA provides some communities with grants to assist with funding such groups.

Public comment pointed out that the relationship between regulators and operators is based on trust regarding some confidential or sensitive information provided to government. Some of that information may not be as readily available if there is concern it could be released to parties with other motives. Chairman Opper discussed that the public disclosure laws in Montana tend toward total transparency. Restricting information would need to be addressed carefully. Other public comments indicated there

are groups that readily share information to improve pipeline safety including the Yellowstone corridor group and the Pipeline Safety Trust. Montana could work to provide information that funnels into these other groups.

C. Spill Response Planning - Chairman Opper discussed the efforts underway to develop an area contingency plan as a part of the ExxonMobil spill penalty. Bonnie Lovelace from DEQ provided a brief overview of the national emergency response annex's, DEQ's new role as a lead agency, interactions with DES, and DEQ's lesson learned. Public comment included a request for Montana union members trained in emergency response including hazardous material to be used in future responses. The council invited organizations to participate in the emergency response planning process to ensure the state is aware of all the resources available including specialty trained labor. One public commenter pointed out the need for response assistance and information for agricultural impacts of emergencies.

D. Mapping - The Council discussed the need to add channel migrations zones - both vertical (scour) and lateral, and flood plain studies to the GIS mapping of pipelines in the state. There is no state-wide consolidated information on channel migration zones, but it appears much is available. There was much discussion on who has certain information and where it can be found. Council will consider a project to consolidate various state, federal, and private resources to create or modify databases to merge relevant information.

E. Education and Assistance - Although this idea was well received, there was some discussion of what and how more education could be provided. Chris Hoidal, PHMSA, discussed the regulatory requirement for operators to provide a public awareness program. Public comment included need for victims to know where to go to get additional information. There was also discussion regarding what information is unavailable with more study needed, such as how contamination affects agriculture.

Some concern was expressed about the vagueness of the report. Chairman Opper said the recommendations in the final Governor's report would be somewhat more specific in nature. Public comment emphasized the desire for the state to be proactive in response. DEQ was complimented on how staff protected community interests during last summer's clean up. Some felt that without DEQ the Silvertip Pipeline Oil Spill cleanup process may not have gone as smoothly or been as complete.

V. Next Steps

Chairman Opper indicated that the draft report would be edited with changes resulting from public comment. The final report to the Governor would be made in September.

VI. Adjournment

Tim Reardon made a motion to adjourn the meeting, Mary Sexton seconded the motion, and the meeting was adjourned.